AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-183

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor at amsat.org

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* Remember to send in your 2012 AMSAT Field Day Satellite Summary *
*  Sheet to kk5do@amsat.org or kk5do@arrl.net by July 9, 2012  *
* Field Day Rules and Sheets are linked at http://www.amsat.org.  *
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SB SAT @ AMSAT $ANS-183.01
ANS-183 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 183.01
>From AMSAT HQ SILVER SPRING, MD.
July 1, 2012
To All RADIO AMATEURS
BID: $ANS-183.01

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AMSAT Journal In the Mail

AMSAT Journal Editor Ed Long, WA4SWJ said this week the next issue of the Journal is at the print shop and will be in the mail soon.

With this issue we note that Ed is retiring as the Journal editor. Doug Loughmiller, W5BL will take over the reins of the Journal. Ed, thank-you for your years of hard work on the Journal! Doug, we look forward to working with you!

There has been a delay in publishing the Journal. AMSAT President Barry Baines, WD4ASW noted, "The reasons for not getting the Journal published on time is not due to the transition of editors, but due

to lack of materials for publication. Please read the associated call for articles news item in this ANS ... and send Doug your materials!"

Here are some of the features of the upcoming Journal:

+ Satellite Export Controls - Progress Report

+ FUNcube Project Update

+ Spotlight on VUSAT OSCAR 52 (VO-52)

+ 2011 AMSAT BoD Meeting, Symposium & General Meeting
  AMSAT Board of Directors Meeting Minutes, San Jose, CA

+ AMSAT Activities at the 2012 Greater Houston Hamfest

+ Museum Ships Weekend 2012 - A Record Breaking Year

+ Updates of AMSAT's on-going development of launch opportunities including Fox-1 aiming for early 2013.

  o AMSAT co-development and acceptance into three satellite programs in the NASA Edison small satellite flight demonstration mission.

  o AMSAT partnership with Auburn University and The University of Alabama on a National Science Foundation (NSF) grant application.

Keep an eye on your mailbox for your next issue of the AMSAT Journal!

[ANS thanks Ed Long, WA4SWJ; and Barry Baines, WD4ASW for the above information]

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Call For Articles - Author's Guide to the AMSAT Journal

You are invited to share your amateur radio in space ideas and experiences with fellow satellite operators.

The AMSAT Journal, a bi-monthly publication of AMSAT-North America, brings you the latest information in satellite mission planning, satellite-related hardware design and construction, satellite-related software design and implementation, and amateur radio earth station construction.

AMSAT Journal Editor Doug Loughmiller, W5BL noted, "Publishing a quality publication is hard work, much like building a satellite itself, it requires a team working together to insure that the publication reaches the membership in a timely manner which contains informative and useful content. In my view the Journal should address a number of topics on a regular basis. I would like to enlist the services of individuals who would be willing to serve as a column coordinators for each of the topics", including:

+ Organizational news
+ Spacecraft Engineering Topics
+ Spacecraft Operational Topics (Command and Control, mission analysis etc.)
+ Spacecraft Utilization (What's on the birds, what are we learning?)
+ Hands-On Projects for ground station applications

+ Educational News
+ Amateur Radio Astronomy
+ EME
+ High Altitude Balloon Flights
+ General Space Science Topics.

Your articles are especially welcome. Simply type out your ideas on your computer and send them in. Your article will be "cleaned up" and formatted for you during the editorial processing of the AMSAT Journal. Send your article to the AMSAT Journal e-mail box via: journal@amsat.org.

There is no need to do any special formatting on your submission because the final layout format is driven by the magazine's type setting software. All you need to include is:

+ Your text in MS-Word or plain text format

+ Graphics in as high pixel resolution possible saved in separate files (jpg, gif, tiff).

An MS-Word file with embedded graphics is the most difficult format to typeset. Separate text and graphics files work the best.

If you have any questions, or need some help feel free to contact the editor at the AMSAT Journal at journal@amsat.org.

The AMSAT Journal is looking forward to hearing from you soon!

[ANS thanks Ed Long, WA4SWJ; Doug Loughmiller, W5BL; and Barry Baines, WD4ASW for the above information]

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13 Original Colonies Special Event Includes Satellite Operations

The 2012 13 Colonies Special Event has been operating since July 1 but there is still time to work them since they plan to be on the air through July 5. Operators will be on the satellites again this year for the special event.

Recognizing that the 4th comes in the middle of the week (Wednesday) please keep in mind that there may be fewer operators available on the work days so, PLEASE BE PATIENT!

Please send your QSL requests directly to each operator.

| STATE | SE CALL | STATION & OPERATOR | |
|---|---|---|---|
| NY | K2A | WB2OQQ | Pete |
| VA | K2B | NL7VX | Steve |
| RI | K2C | N1MIW | Larry |
| CT | K2D | WA8SME | Mark |
| DE | K2E | KB2M | Jeff (SSB Birds) |
| DE | K2E | W3FIS | Paul (FM Birds) |
| MD | K2F | WA3SWJ | Bruce |
| GA | K2G | N3TL | Tim |
| MA | K2H | KB1PVH | Dave |
| NJ | K2I | KB2M | Jeff (Here when not in DE) |
| NC | K2J | W4MPS | Marc |
| NH | K2K | NE1H | Bob |
| SC | K2L | K4YYL | Art |

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 PA      K2M       KB3WSW   Elizabeth
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Link to the satellite page with the list of operators and additional information: http://www.13colonies.info/Satellites.htm

The main page with all the time and date information is: http://www.13colonies.info/

[ANS thanks Dave, KB1PVH for the above information]

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Canada Scouts ARISS Contact Successful

On Saturday, June 23, Scouts Canada, Nova Scotia Council in Dartmouth, Canada called on-orbit astronaut Andr Kuipers, PI9ISS during an Amateur Radio on the International Space Station (ARISS) contact via telebridge station VK5ZAI in Australia.

The contact was held as part of a space event with Scouts of various ages in conjunction with groups earning their Science Badge awards. Over 150 were in attendance. The contact was Webcast and the presentation was captured for retransmission by Aliant IPTV Atlantic during July/August and for development of an edited CD for distribution to interested parties.

There was excellent media coverage including 3 television stations and two newspapers. A 20 minute radio interview was held with "The Rick Howe Show" on Friday, June 22 on Amateur Radio - ARISS and Field Day Operations. In addition, an article is being prepared for periodicals: Royal Astronomical Society, Halifax Public Libraries, Radio Amateurs of Canada.

[ANS thanks the ARISS Status Report for June 25, 2012 for the above information]

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CQ Magazine Worked All Zones - Satellite Award

Sponsored by CQ Magazine, the Worked All Zones award program is one of the longest running in Ham Radio, having its start prior to WWII.

CQ Magazine explains the details of this award on their website:

The WAZ program, while it involves the use of "DX Entities", does not rely on any particular "Entity's" status as a country. The WAZ award is geographically focused, which is where it's challenge lies. The CQ Worked All Zones (WAZ) Award and its variations are issued to any licensed amateur station presenting proof of contact with the appropriate number of CQ zones of the world. (The CQ Zones map and additional zone information is posted on the CQ web site.)

The Worked All Zones - Satellite award has been available for contacts made since January 1, 1989. While opportunities to contact many of the DX zones were more numerous when HEO satellites were active, your confirmed contacts back to 1989 would qualify you to apply for this award now.

The Satellite WAZ Award requires that the applicant submit QSL cards

from at least 25 zones. The Satellite Award requires that the applicant submit QSL cards from at least 25 zones. Endorsement stickers are issued at the 30, 35, 36, 37, 38, 39 and 40 zone levels. The Satellite Award is not band specific, you may apply QSO's from multiple bands. The Satellite WAZ certificate will indicate the number of zones that are confirmed when the applicant first applies for the award.

Applications and Cards for this award must be submitted to the WAZ Award Manager, Floyd Gerald, N5FG (n5fg@cq-amateur-radio.com)

You can find all of the details of the CQ Magazine Worked All Zone Award on-line at: http://tinyurl.com/CQ-WAZ-Award (CQ Web Site).

[ANS thanks CQ Magazine WAZ Award Manager Floyd Gerald, N5FG for the above information]

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Chinese Amateur Satellite Group Shows CAS-2 Satellite Model

This year the Chinese Amateur Satellite Group (CAMSAT) was a special guest in the AMSAT-DL booth at the HamRadio Fair in Friedrichshafen – HamRadio 2012.

CAMSAT had a model of their next amateur radio satellite, CAS-2 which is planned as the next generation after their first CAS-1 (aka XW-1, HO-68) satellite. HO-68 carried a linear transponder and proved very popular with radio amateurs world-wide.

The May 20 announcement came to light that CAMSAT and students at the Qian Youth Aerospace Academy are now working on the next satellite CAS-2. The announcement indicates that two separate CAS-2 satellite structures are being built – A1 and A2.

The launch of CAS-2 is planned for 2014 into a 1000 km orbit with an inclination of 12 degrees. This orbit means it may not be receivable in those countries at high latitudes.

It is understood that most of the room in CAS-2 will be taken up by the primary (non-amateur) payload and it has only been possible to fit a single channel FM amateur transponder in the satellite.

Further information in Google English can be seen at:
http://tinyurl.com/CAMSAT-CAS-2-Satellite

A photo on the AMSAT-UK web (http://www.uk.amsat.org/8665) shows Fan Shaomin, BA1EO with the CAS-2 model.

A group picture taken at Ham Radio 2012 in Friedrichshafen and a picture of the engraved glass plaque that CAMSAT presented to AMSAT-DL can be seen on the AMSAT Deutschland Facebook page.

[ANS thanks CAMSAT, AMSAT-DL, and AMSAT-UK for the above information]

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Soyuz to Fly 3 Hams Up, 3 Hams Staying, 3 Hams Coming Home

Three Expedition 32 crew members to the International Space Station

are scheduled to launch aboard the Soyuz TMA-05M from the Baikonur Space Center in Kazakhstan on July 15.

The Expedition 32 crew members are NASA astronaut Suni Williams KD5PLB, cosmonaut Yury Malenchenko RK3DUP and Japanese astronaut Aki Hoshide KE5DNI. The trio has been passing tests at the Gagarin Cosmonaut Training Center in Star City, outside of Moscow.

They will join Expedition 31's NASA astronaut Joe Acaba KE5DAR and cosmonauts Gennady Padalka RN3DT and Sergei Revin RN3BS on board the orbiting outpost.

Meanwhile, fellow Expedition 31 members cosmonaut Oleg Kononenko RN3DX and NASA's Don Pettit KD5MDT and Andre Kuipers PI9ISS returned to Earth on July 1.

A back-up ISS crew was also confirmed on Friday. It includes Canadian astronaut Chris Hadfield KC5RNJ/VA3OOG, NASA astronaut Tom Marshburn KE5HOC and cosmonaut Roman Romanenko (no call at this time).

[ANS thanks SpaceDaily.com for the above information]

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KiwiSAT Hoping for Launch mid-2013

News from New Zealand, received via AMSAT-UK reports the development of the amateur radio satellite KiwiSAT is completed and it is now ready for a LEO launch. See: http://www.uk.amsat.org/8686.

KiwiSat carries a 435 or 1268 MHz to 145 MHz linear transponder for SSB/CW operation:

+ Transmit Power: 2 Watts PEP.
+ Beacon frequency: 145.885 MHz
+ Uplink: (U-Band)  435.265 to  435.235 MHZ LSB or
+ Uplink: (L-Band) 1268.880 to 1268.850 MHz LSB
+ Down link: 145.850 to 145.880 MHz USB

The KiwiSAT website says the team have been in discussion with ISC Kosmatras for a DNEPR launch. They hope the satellite will be launched mid-2013. On June 18, 2012, the KiwiSAT team released a status update which can be read at http://www.kiwisat.org/status.html

In addition to the transponder KiwiSAT also carries an Attitude Determination And Control (ADAC) experiment developed by students at Massey University.

See also:
KiwiSAT http://www.kiwisat.org/
AMSAT-ZL http://www.amsat-zl.org.nz/

[ANS thanks the KiwiSat Team, AMSAT-ZL, and AMSAT-UK for the above information]

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Five CubeSats Ready for July 21 JAXA HTV-3 Launch

Viet Nam's F-1 CubeSat team announced on June 23 they have passed flight safety review and are cleared to be included in JAXA HTV-3 mission to the ISS. F-1 arrived at Japan's Tsukuba Space Center where it and four companion CubeSats (RAIKO, WE WISH, FITSAT-1 and TechEdSat) will be integrated with the J-SSOD small satellite deployer before leaving for the Tanegashima launch pad.

After arriving at the ISS aboard the JAXA HTV-3 ISS resupply mission, the J-SSOD deployer will be integrated to the Japanese Experiment Module, also known as Kibo. They will be deployed with the Kibo robotic arm planned for the September, 2012 timeframe.

The five CubeSats on this mission include:
+ Raiko
+ We Wish
+ FITSat 1
+ F-1 Vietnam Student CubeSat
+ TechEdSat

RAIKO - Wakayama University, Japan
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http://www.astro.mech.tohoku.ac.jp/RAIKO/ (Japanese)

This 2U CubeSat includes experiments for:
+ Earth photography with a fish-eye lens camera
+ Photo tracking during deployment from ISS to measure relative motion.
+ Experimental star sensor
+ Membrane deployment experiment for de-orbit
+ High speed data communication experiment by Ku-band communication equipment:
  o Orbit determination experiment by Doppler frequency measurement of Ku-band beacon.
  o Mobile ground station and global cooperation for reception

FITSAT-1 - Fukuoka Institute of Technology, Japan
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http://www.fit.ac.jp/~tanaka/fitsat.shtml

The main mission of this 1U CubeSat will be a demonstration of high speed data transfer from a satellite. A second experiment aboard the satellite involves an attempt at visual tracking from the ground of the high-output LED flash to investigate the possibility of optical communication with satellites. The light from this flash will be received by the ground station equipped with a telescope with photo-multiplier linked to a parabolic antenna tracking the 5.8GHz downlink.

Frequencies announced for FITSAT-1:
CW Beacon 437.250 MHz,
FM Data   437.445 MHz,
High speed data 5840.00 MHz.

WE WISH - Meisei Electric Co., Ltd., Japan
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http://www.meisei.co.jp/news/2011/0617_622.html

The WE WISH mission is to investigate monitoring of the global environment from space with the use of an upper atmosphere measurement experiment. This includes GPS technology, and technical proof of concept of a micro infra-red camera.

F-1 Vietnam Student CubeSat
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Vietnamese students in Hanoi plan to orbit the country's first sat-

ellite, their amateur radio CubeSat F-1 with the callsign XV1VN. The satellite will carry a low resolution C328 camera and two Yaesu VX-3R transceivers using 145.980 and 437.485 MHz.

+ VX-3R1, 437.485 MHz FM downlink:
  o Solar cell power only, operates in sunlight only
  o Output power: max 0.3W, half-wave dipole antenna
  o Morse code beacon (10 chars) using PWM CW every 30 seconds

+ VX-3R2, 145.980 MHz FM downlink:
  o Rechargeable battery, operates in dark and sunlight
  o Output power: max 1.0W, half-wave dipole antenna
  o AFSK 1200bps, half duplex, one AX.25 packet every 30 seconds

TechEdSat - San Jose State University
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http://ncasst.org/techedsat.html
http://www.uk.amsat.org/5018

TechEdSat is a 1U CubeSat built by San Jose State University in partnership with NASA Ames Research Center and AAC Microtec. It's mission is to evaluate Space Plug-and-play Avionics (SPA) designed in Sweden by AAC Microtec, and to perform a communications experiment utilizing the Iridium and Orbcomm satellite phone network.

TechEdSat has received IARU frequency coordination for its downlink on 437.465 MHz.

[ANS thanks the CubeSat teams, AMSAT-UK, and Mineo Wakita JE9PEL for the above information]

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AMSAT News Podcasts Available to Download and Listen

The Houston AMSAT Net, hosted by Andy W5ACM, meets every Tuesday evening at 8PM Central Time (UTC-5). They read the ANS bulletins and any late breaking amateur satellite news that has come out since the weekend ANS news cycle.

The net is streamed live on the AMSAT Echolink Node and via an MP3 stream. The audio is also available as a podcast from the current net including an archive of past net podcasts.

Bruce KK5DO web page at http://www.amsatnet.com/ has the links to the podcasts (and live streaming information). Click on the "Listen to Live or Past Nets" link on the left side of the web page to find the links to the podcasts.

If you go to the iTunes store and search podcasts there for either kk5do, amsat or houston amsat net, you will find the same podcast able to be streamed right to your iPhone/iPad/iPod. Also, if you have an iPhone and you have downloaded the Echolink app, you can listen to the net live on Tuesdays at 8PM Central.

[ANS thanks Andy, W5ACM and Bruce, KK5DO for the above information]

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Satellite Shorts From All Over

+ Amateur Radio Club K4BFT received good media coverage at Field Day this year operating near the Alabama Space and Rocket Center. Their satellite station has several shots in the article in the link below, including SatPC32. There were 3 local TV stations and 1 local newspaper that visited the Satellite Station this year. See: http://photos.al.com/huntsville-times/2012/06/ham_field_day_9.html (via Tim, N8DEU)

+ Hams like big antennas no matter what the operating mode. You'll enjoy the two videos "Moonbounce Swiss Style" when Sam Jewell G4DDK and John Worsnop G4BAO were shown round the HB9Q amateur radio moonbounce (EME) shack by Alex Artieda HB9DRI. Watch it at: http://www.southgatearc.org/news/june2012/moonbounce_swiss_style.htm

+ Listen to some dramatic music, watch a fast-paced video and see a few animated high-fives in the SpaceX video and the latest views of Dragon crew capsule: http://www.youtube.com/watch?feature&#65533;ayer_embedded&v&#65533;n8044mkvc

+ The latest updates to the CQ Newsroom has news of the STRaND-2 satellite program and the ARISS volunteer initiative, along with amateur radio news. You can read this online at: http://cqnewsroom.blogspot.com/

+ The Antenna Column by Kent Britain, WA5VJB in the Spring, 2012 issue of CQ VHF Magazine (http://www.cq-vhf.com) discusses "Herringbone Log Periodics plus Another AMSAT LEO Antenna." Select the link 'Click here for a look inside!' and you will find the link to a preview version of the magazine article.

+ Paul, 2M1EUB is making mobile satellite DX contacts from Scotland. He reports being to work K3SZH on FO-29. He plans to be on the air from Scotland until around July 8-9.

+ Wyatt, AC0RA worked Bill OM3BD/NZ5N in Slovakia on AO-7 at a distance of over 7800 kms. Bill wrote, "The QSO was remarkably easy, we talked to each other for over a minute with strong sigs. I was expecting maybe 15 seconds of a signal way down in the noise, but this was no sweat at all, and it was just our first attempt. This suggests that significantly longer distances are possible. The AO-7 orbit seems a bit different this summer, my North America windows are longer and extend deeper into the USA."

+ NASA/JPL posted an amazing video highlighting the incredible engineering feat it will be to land the Curiosity Rover onto the surface of Mars. Watch it at: http://www.youtube.com/watch?v&#65533;_Af_o9Q9s&feature&#65533;ayer_embedded

+ NASA Goddard Space Flight Center in Greenbelt, Maryland, invites you to try out their new, on-line game, called &#65533;Build it Yourself: Satellite!&#65533; This is a Flash-based game, a learning tool for students

  and adults that plays in your browser window. See: http://www.jwst.nasa.gov/build.html

+ ARISS International Team meeting was held on Tuesday, June 19. Minutes have been posted: http://ariss.rac.ca/arisstel2012-06-19.htm

+ Plan Ahead! To celebrate Venezuelan Navy Day, members of the Grupo DX Caracas will be active as YW5B from La Blanquilla Island between July 11-16. Activity will be on 160-2 meters using CW, SSB, Satellites, FM and the Digital modes. (Ohio/Penn DX Bulletin No. 1065)

+ The next Hudson Valley Satcom net dates are on Thurs day July 5
  and July 19 at 8PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeat-
  er (PL 100). The echolink connection has been experiencing prob-
  lems so you are invited to send an e-mail to N2OXV at arrl.net to
  make sure that the N2EYH-L EchoLink node is available if you plan
  to join via this route. (Stu, WA2BSS)

[ANS thanks everyone for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that please keep in mind the time a neutron goes into a cafe and asks the waiter, "How much for lunch?" The waiter replies, "For you, no charge." Just outside, two atoms are walking down the street and they run in to each other. One says to the other, "Are you all right?" "No, I lost an electron!" "Are you sure?" "Yeah, I'm positive!"

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM